

Standard Operating Procedure

Title: Measuring Optical Density of an [REDACTED]

1. Objective

This document describes a procedure for measuring optical density of [REDACTED]

2. Scope

This procedure applies to any fermentor, bioreactor or shake flask [REDACTED] sample.

3. Referenced Documents

N/A

4. Safety

Consult appropriate material safety data sheets (MSDS) for safe chemical handling.
Always observe safe laboratory practices.

5. Equipment and Materials

5.1 [REDACTED]

5.2 Fisherbrand disposable cuvettes, Fisher Scientific, Catalog No. [REDACTED]

5.3 Cuvette holder, Fisher Scientific, Catalog No. [REDACTED]

5.4 Deionized (DI) water

5.5 [REDACTED] sample

6. Procedure

6.1 Turn on the [REDACTED] by turning the [REDACTED]. Allow the instrument to warm up for at least [REDACTED] minutes to stabilize.

6.2 After the warm up period, set the wavelength to [REDACTED] using the Wavelength Control Knob.

6.3 Set the [REDACTED]

- 6.4 Make sure that the sample compartment is empty and the cover is closed. Adjust the display to [REDACTED] with the [REDACTED] (knob on the front left side of the instrument).
- 6.5 Set the display mode to Absorbance by pressing the Mode Select button until the LED is lit.
- 6.6 Fill a cuvette with DI water.
- 6.7 Insert the cuvette into the cuvette holder and then place the holder into the sample compartment. The clear side of the cuvette must be parallel to the line on the sample compartment opening (facing the Wavelength Control Knob).
- 6.8 Adjust the display to [REDACTED] with the Transmittance/Absorbance Control (knob on the front right side of the instrument).
- 6.9 Remove the cuvette holder from the sample compartment, close cover, and remove cuvette from cuvette holder.
- 6.10 Add [REDACTED] of sample to be measured to cuvette.
- 6.11 Insert the cuvette into the cuvette holder and then place the holder into the sample compartment. The clear side of the cuvette must be parallel to the line on the sample compartment opening (facing the Wavelength Control Knob).
- 6.12 The acceptable range for absorbance is between [REDACTED]. If the absorbance reading is greater than [REDACTED] then dilute the sample in DI water until reading falls within acceptable range.
- 6.13 Read absorbance when display reading stabilizes and record on the appropriate log sheet. The reading is displayed as [REDACTED].
 - 6.13.1 If sample has been diluted, then multiply reading displayed by dilution factor and record as [REDACTED] in appropriate log sheet.
- 6.14 Remove the cuvette holder from the sample compartment, close cover, and remove cuvette from cuvette holder.
- 6.15 Turn off the instrument by turning the Power Switch counter-clockwise until the display shuts off.

